## Message

From: d'Almeida, Carolyn K. [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=9EC4401AFA1846DD93D52A0DDA973581-CDALMEID]

**Sent**: 6/6/2016 4:33:53 PM

To: ARohrbaugh@TechLawInc.com; KBrasaemle@TechLawInc.com

CC: Anderson, Michael [MAnderson@TechLawInc.com]

Subject: FW: 2016-6-1 - Williams AFB - Clarification request - Borehole depth extension if NAPL encountered -downhole

packer purpose - ST012 EBR well install

Attachments: removed.txt

fyi

From: JERRARD, CATHERINE V GS-13 USAF HAF AFCEC/CIBW [mailto:catherine.jerrard@us.af.mil]

Sent: Monday, June 06, 2016 8:34 AM

To: Wayne Miller < Miller. Wayne@azdeq.gov>

Cc: steve@uxopro.com; Smallbeck, Donald R. (donald.smallbeck@amecfw.com) <donald.smallbeck@amecfw.com>; Pearson, Stuart C. (stuart.pearson@amecfw.com) <stuart.pearson@amecfw.com>; (Geoffrey.Watkin@cn-bus.com) <Geoffrey.Watkin@cn-bus.com>; d'Almeida, Carolyn K. <dAlmeida.Carolyn@epa.gov>; Davis, Eva <Davis.Eva@epa.gov> Subject: FW: 2016-6-1 - Williams AFB - Clarification request - Borehole depth extension if NAPL encountered -downhole packer purpose - ST012 EBR well install

Wayne -

Thanks for following up your questions with Steve's notes. Here are Don's responses noted in red.

Thanks.

Cathy

//SIGNED//
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----Original Message----

From: Wayne Miller [mailto:Miller.Wayne@azdeq.gov]

Sent: Wednesday, June 01, 2016 12:22 PM

To: JERRARD, CATHERINE V GS-13 USAF HAF AFCEC/CIBW

<<u>catherine.jerrard@us.af.mil</u>>

Subject: 2016-6-1 - Williams AFB - Clarification request - Borehole depth extension if NAPL encountered -downhole packer purpose - ST012 EBR well install

Can you please assist in clarifying a couple EBR-boring field observations?

- (1) Do EBR well borings extend beyond NAPL observation/evidence depths?

  Yes. Borings have been extended deeper when NAPL dye tests were positive at or near the bottom of the planned boring.
- (2) Why are downhole packers installed?

Packers are installed to isolate the screens at a well locations that have screens in two zones (e.g., both a UWBZ and an LSZ screen at one well).

Field observations revealed NAPL odors/positive dye test to 223 ft. LSZ50-INJ (Table 4-1 depth 220 ft.). Did borehole continue until LNAPL final depth exceeded?

Yes, the boring went past 230 feet and then stopped due to no indication of LNAPL.

How is final depth determined?

Boring depth is as indicated in Addendum #2 unless a decision is made to drill deeper due to positive dye test kits. Well screen intervals are adjusted from the Addendum #2 plan based on geologic and contamination data observed during drilling.

What is purpose of downhole packers (reference to LSZ51, and any other locations)?

See explanation above.

Thank you.

Wayne Miller

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